

**SAS Superstructure**

Location: 04-SF-80-13.2 / 13.9

Client Name: CalTrans

Run date 19-Nov-14

Time 5:11 PM

Daily Diary Report by Bid Item

Contract No.: 04-0120F4

Diary #: 175 Const Calendar Day: 426 Date: 08-Nov-2010 Monday

Inspector Name: Bruce, Matt Title: Transportation Engineer

Inspection Type: Intermittent

Shift Hours: 07:00 am 05:30 pm Break: 00:30 Over Time: 02:00

Federal ID:

Location:

Reviewer: Mathur, Lalit

Approved Date: 11-Apr-11 Status: Approved

04-0120F4
04-SF-80-13.2/13.9
Self-Anchored
Suspension Bridge

Weather

Temperature 7 AM 50 - 60 12 PM 50 - 60 4PM 50 - 60

Precipitation 0.00"

Condition Mostly sunny.

Working Day ☒ If no, explain:**Diary:**

Dispute

Work description.

- See Lalit's diary for ABFs labor, equipment, and operations at the W2 cap beam.

- Continued to process the surveying information gathered last week of the movement of the E2 cap beam at 12 points on top of the beam.

- Attended the Cadweld demonstration in the Pier 7 warehouse at 9:00am. The general intent was to show the volatile operation of the ignited molten metal fusing and splicing the wrapping wire to be used for the main cable system. Refer to Alex Schmidt and Warren Collins diaries for more details in addition to the photos /comments below regarding the product/equipment.

- Investigated/inspected the W2E Hinge K concrete surface for acceptance. The issue of cleaning and not roughening the concrete surface was discussed early in the day with ABF superintendent Scott Smith. The concrete surface particularly in question was the W2E South Hinge K where there was a grout streak and laitent debris (aged polystyrene that was a yellow color) on the surface that needed to be cleaned prior to the Hinge K pipe beam assembly being erected. It should be noted that myself and Ken Beede jointly decided on the conditions of acceptance for the concrete surface prior to erection of the Hinge K pipe beam assemblies.

A grinder was used to remove the grout streak and it smoothed the concrete surface too much. Additionally the ABF laborers used the grinder to clean the concrete surface in a few areas at the bottom of the concrete face and were stopped. Since the grout streak couldn't be removed with a wire brush the grinder was the only option. However the grinder was not acceptable for the remaining areas to be cleaned because it made the surface too smooth. A surface roughness of 3 (seen in the photo below) as prescribed by the International Concrete Repair Institute was to be retained while cleaning the concrete which was already in place. A video was taken to demonstrate this condition of acceptance to clean the concrete while maintaining the in-situ surface roughness with the wire brush. It was recommended to ABF supervisors to use a pressure washer to clean the surface. This option is the preferable method suggested by ASTM. Also ABF used this technique for the W2/OBG closure joints. They did not exercise that option citing concerns of safety and rewapping the Macalloy rods.

ABF engineer Zach Lauria was very resistant/defiant to clean the concrete surface prior to the erection of the W2E Hinge K pipe beam assemblies. I referred to the project Special Provisions section 10-1.56, Standard Specifications Section 51-1.13, RFI 1240R00, ASTM specifications for concrete surface prep. numbers D4258, D4259, and the Bridge Construction Memo 105-7.0. It was emphasized that even though the shear resistance was more than achieved with the shear keys approved in RFI 1240R00 the surface needed to be cleaned. The intent is to achieve a proper bond between the concrete and grout to mitigate cracking for even the slightest amount of movement especially at this area where seismic loads will be transferred.



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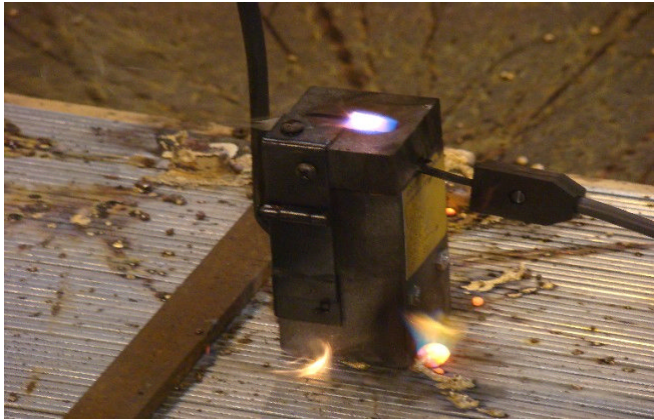
Inspector Name: Bruce, Matt

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Attachment



The Cadweld fuse box in the process of being ignited.



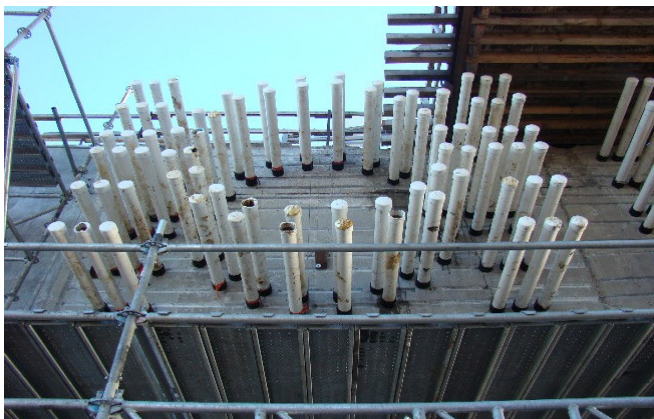
Cadweld demonstration where the fuse box had to be ignited to deposit the molten weld to the main cable wrapping wire splice.



The grain packet in the Cadweld fuse box ignited creating the molten/liquid weld material.



The condition of the W2E South Hinge K concrete surface at the beginning of the day which was NOT acceptable due to a grout streak and laitence debris



The condition of the W2E North Hinge K concrete surface at the beginning of the day which was nearly acceptable.



Concrete surface at the end of the day for the W2E South Hinge K concrete surface for the grout pad.

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Samples of the splice welds to be tensile tested at Translab in Sacramento.



Concrete surface roughness of 3 to be intact after cleaning to ensure a proper bond between the grout and W2 concrete.